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923 A CONFOUNDING CASE OF BLADDER OUTLET OBSTRUCTION

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Background Eosinophilic cystitis is a rare inflammatory condition caused by eosinophilic infiltration of the bladder wall. There is an association with active urinary infection and eosinophilia at time of presentation however the clinical presentation is heterogenous. Symptoms may include haematuria, urinary urgency and frequency, and abdominal pain.

Objectives The purpose of this abstract is to raise awareness of eosinophilic cystitis as a potential cause for bladder mass and bladder outlet obstruction in children.

Methods We discuss the presentation and eventual diagnosis of a 13-month-old girl with eosinophilic cystitis.

Results A 13-month-old girl with no previous medical history presented to her local hospital with an acute history of reduced urine output, vomiting, and lethargy. Initial urine dipstick was positive for ketones, leucocytes, blood, and protein.

Haematological work-up demonstrated anaemia (haemoglobin 95 g/L), and eosinophilia (2.6×10^9). Biochemical investigations showed acute kidney injury (peak serum creatinine 218 $\mu\text{mol/L}$), and pseudohypoaldosteronism. Sodium dropped to a nadir of 128 mmol/L and potassium peaked at 7.7 mmol/L. Coagulation studies and CRP were normal. Glomerulonephritis screen was inconclusive, and urine culture was negative.

Hyperkalaemia was managed acutely, and she was commenced on ceftriaxone and maintenance intravenous fluids due to clinical dehydration. Despite this, systolic blood pressures remained elevated (>95th centile) and she was commenced on amlodipine.

A local urinary tract ultrasound demonstrated bilateral hydronephrosis with dilated upper ureters, and a urethral catheter was inserted. Serum creatinine fluctuated dramatically despite catheterisation and she was transferred for tertiary nephrology input on day four of admission.

Due to the unexplained variability of her renal function, a kidney biopsy was performed showing acute tubular injury and tubulointerstitial nephritis with eosinophilic infiltrates. The overall picture was suggestive of urinary tract obstruction.

She underwent two further ultrasounds at our centre. The first showed mild bilateral pelvicalyceal dilatation but the bladder base was not fully visualised. The second was performed seven days later demonstrating persistent upper tract dilatation and a lobulated bladder base lesion causing evidence of bladder outlet obstruction.

There were concerns regarding a potential malignant cause. Due to the possible need for oncology input, the patient was transferred to a third centre for cystoscopy and bladder biopsy. Histopathology confirmed the diagnosis of eosinophilic

cystitis. She was started on mebendazole and transferred back to us for ongoing care.

There was rapid resolution of renal dysfunction and eosinophilia at time of discharge. Her most recent blood results show a creatinine of 28 $\mu\text{mol/L}$ and eosinophil count of 0.1×10^9 . Follow up ultrasound one month later showed normal appearance of the urinary tract.

Conclusions Our experience adds to the limited literature on eosinophilic cystitis in the paediatric population. Eosinophilic cystitis is a rare, easily treatable, and important differential of bladder mass in children. It should be considered early in children presenting with eosinophilia or urinary tract obstruction with no clear cause. This case also highlights the need for full imaging of the urinary tract including the bladder base in cases of likely urinary tract obstruction.

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924 THE ROLE OF THE NEUTROPHIL IN CHILDHOOD IGA VASCULITIS: A SYSTEMATIC REVIEW

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Background IgA vasculitis (IgAV), formerly known as Henoch-Schönlein purpura, is the most common form of vasculitis in children. Although IgAV is usually a self-limiting disease it can cause acute severe gastrointestinal (GI) inflammation and chronic kidney disease. The aetiology of IgAV is relatively unknown and although the neutrophil has been found to have a key role in other types of vasculitis it is not known if the neutrophil plays a role in IgAV.

Objectives The aim of this study was to perform a systematic literature review to establish the role of the neutrophil in childhood IgAV and to identify any trends with phenotype.

Methods PubMed, Ovid:Medline, Scopus and Web of Science were systematically searched using predefined criteria to identify studies which measured serum neutrophil levels in children with IgAV. The primary outcome of this review was neutrophil levels measured in the blood either presented as absolute neutrophil values or as a neutrophil:lymphocyte ratio (NLR). The study aimed to compare two key areas of interest. Firstly, the neutrophil levels compared between all patients with IgAV and age- and sex-matched healthy controls and secondly the neutrophil results between patients with IgAV with and without major organ involvement (defined as any GI or kidney involvement).

Results The search identified 346 studies, of which a total of 11 studies, 2464 children, were included. The results showed a statistically significant increase in the absolute neutrophil levels in patients with IgAV compared to healthy controls and a strong association with gastrointestinal (GI) involvement. Neutrophil levels in children with IgAV-Nephritis (IgAV-N) did not show any significant difference.

Conclusions The results suggest that the neutrophil does play a role in the disease course of childhood IgAV particularly when associated with GI system involvement.